



Arches Visitor Guide



Bring this paper to the visitor center desk for travel tips, or turn to page 4.

Celebrating a Centennial

ARCHES NATIONAL PARK WELCOMES A GLOBAL COMMUNITY of over one million visitors each year. They come to experience balanced rocks, towering fins and spires, and the world's largest concentration of natural sandstone arches. This landscape inspires awe at first glance but those who take the time to look more deeply receive the greatest reward. During your visit, pause and smell the fleeting bloom of a desert flower, feel the twisting trunks of ancient junipers, gaze into potholes teeming with life, and listen for raven-call echoing through the rocks.

The park's 76,519 acres abound with surreal geologic wonders that represent millions of years of earth's history exposed by the tireless hands of water, ice, and wind. Erosional features that color the land paint rocky portraits of the ancient sand dunes, tidal flats, rivers, and lakes from which they originated. This is a place of enduring life and raw beauty, a window from which to contemplate the past and a shared future.

Arches is one of more than 400 sites managed by the National Park Service, a federal agency established by Congress in 1916 to care for America's great scenic and historic places. In 2016, the National Park Service celebrates one hundred years of preserving America's shared future by protecting her treasured land-

scapes and cultural heritage.

One hundred years from now, what challenges will national parks face? How will climate change, invasive species, and air, light, and sound pollution affect these wild and inspiring places? Remember, you have the power to help ensure their vitality.

During your visit, join a ranger hike, consult a field guide, attend a night sky program, and talk with rangers at the visitor center. Most importantly, leave no trace, stay on trails, and respect wildlife. When you learn more about national parks and care for them, you help secure their legacy for the health of the natural world and the human spirit.

As you view the Milky Way sweep over Turret Arch or contemplate the ultimate fate of Balanced Rock, remember that Arches, and all national parks, are places of connection to this precious earth we call home. For one hundred years, people have been traveling to national parks to come home to nature. Here's to one hundred more.



FIND YOUR PARK

Find Your Park

As we prepare for the National Park Service's Centennial in 2016, we want to help you find your park! A park can be a place, an experience, or a state of mind.

You can find yours at FindYourPark.com, and share your photos or stories with the hashtag #FindYourPark.

Get up, get out there, and find your park! Visit FindYourPark.com to find places, share stories, or find out how to get involved.



Protect Your Park Stay on Trails

This land is every bit as fragile as it is beautiful. If you step off the trail, you can easily injure the soil's living surface. When biological soil crust is damaged, it can take centuries (literally) to recover.

Help us protect park soils during your visit. Please walk on trails, rock or in sandy washes (where water flows when it rains), and keep all vehicles and bikes on designated roads.



Don't Leave Your Mark Graffiti: A Growing Problem

Even though graffiti is prohibited by law, rangers and volunteer groups spend hundreds of hours every year removing it at Arches National Park.

Protect your park: don't leave your mark. If you discover graffiti in the park, please let us know. Otherwise, make memories, take pictures, but leave no visible trace of your visit.

Have a Safe Visit

The sun is intense, and shade is minimal in the high desert. Wear sunscreen and a hat to protect your skin. Every year, rangers respond to dozens of search and rescue incidents in the park. For your own safety, please keep the following in mind throughout your visit:



Drink water: at least 1 gallon (4 L) per day. Water is available at the visitor center and at Devils Garden.



Stay on the trail. Cairns (small rock piles) mark routes. Follow them, and don't build your own.



Rocks fall. People fall. Watch your step. Sandstone is slippery when wet or icy.



When thunder roars, go indoors. There is no safe place outside. Seek shelter in a safe building or vehicle. In winter, avoid snow or icy trails.



National Park Service
U.S. Department of the Interior

Arches National Park protects extraordinary examples of geologic features including arches, natural bridges, windows, spires, balanced rocks, as well as other features of geologic, historic, and scientific interest, and provides opportunities to experience these resources and their associated values in their majestic natural settings.

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Arches Visitor Guide Published By
Canyonlands Natural History Association, a not-for-profit organization that assists the National Park Service in its educational, interpretive, and scientific programs. For more information, see page 8.

The National Park Service cares for the special places saved by the American people so that all may experience our heritage.

Park Fees

Arches National Park charges fees for park entrance, camping, and some permits. Eighty percent of the fees collected at Arches are returned to the park to address priority needs in maintenance, infrastructure, resource management, and visitor services.

Entrance Fees

- Single-vehicle entrance fee: \$25 / vehicle
- Motorcycle entrance fee: \$15 / vehicle
- Pedestrian/Bicycle: \$10 / individual
- Interagency Annual Pass: \$80
- Southeast Utah Parks Pass: \$50

Passes for US citizens or permanent residents with disabilities, seniors, and active-duty military personnel are also available. Inquire at the entrance station or visitor center.

Camping Fees

- Devils Garden: \$25 per site, per night
- Juniper Group Site: \$100-250/night (based on group size of up to 55 people)
- Canyon Wren Group Site: \$75-160/night (based on group size of up to 35 people)

Fiery Furnace Fees

- Ranger-guided Walk
 - Adults: \$16
 - Youth / Senior Pass / Access Pass: \$8
- Private Permit
 - Adults: \$6
 - Youth / Senior Pass / Access Pass: \$3
 - Annual Permit: \$15

Park Information

HOURS OF OPERATION

The park is open 24 hours a day, 365 days a year. The visitor center is open daily from 9 am to 4 pm, with extended hours mid-March through October. The visitor center is closed December 25.

RANGER PROGRAMS

Rangers lead **Guided Walks** most days, spring through fall, at various locations in the park. Routes follow easy or moderate trails up to one mile in length. Check at the visitor center for times and locations.

Fiery Furnace Walks are offered daily, spring through fall. These moderately strenuous, three-hour hikes wind through terrain that requires scrambling up and through narrow cracks and along narrow ledges above drop-offs. Children under 5 are not permitted. Make reservations at www.recreation.gov, or inquire at the visitor center for available tickets. Walks may fill weeks in advance. If you have a reservation, you must check in at the visitor center at least one hour before your hike.



Rangers may present **Evening Programs**, spring through fall, at the Devils Garden Campground amphitheater. Check at the visitor center for times and topics.

CAMPING

You may only camp in the campground or with a backcountry permit.

Devils Garden Campground has 50 sites and is 18 miles from the park entrance. The campground is usually full daily between March and October. Each site has a picnic table and a fire ring. Water and flush toilets are available in several locations. Wood gathering and ground fires are prohibited. You can purchase wood from the campground hosts March through October. Generator use is allowed 8-10 am and 4-8 pm. Quiet hours are between 10 pm and 6 am. Groups of 11 or more can use the group tent sites **Juniper Basin** and **Canyon Wren**. No RVs or trailers are permitted in group sites.

CAMPING RESERVATIONS

You can reserve sites at Devils Garden Campground between March 1 and October 31. November through February, campsites are first-come, first-served. Reservations must be made at least four days in advance. **We strongly recommend reserving a site** prior to your arrival at Arches. If you don't have reservations, plan to use other camping options outside the park. You can reserve a site online at www.recreation.gov or by calling 877-444-6777 (toll free), 877-833-6777 (TDD), or +1 518-885-3639 (international).

BACKPACKING

Arches has few areas that qualify as "backcountry." Outside the developed visitor area there are no designated trails, campsites, or reliable water sources. To backpack at Arches, you must obtain a backpacking permit inside the visitor center and camp at least 1 mile from roads and ½ mile from trails. Or, consider backpacking at **nearby places like Canyonlands National Park** that offer more extensive backcountry opportunities.

SHARE THE ROAD

Park roads are narrow and winding. **Do not stop in the roadway**—save sightseeing for designated viewpoints. Watch for pedestrians and bicycles. Ensure a minimum distance of 3 feet (1 m) when passing.

CYCLING



You may ride bicycles only on roads—not on hiking trails or off-road. Ride single file, and be attentive to passing cars, and RVs or buses that may not be aware of cyclists. The paved road can be narrow and winding, and **there are no shoulders or bike lanes**. Many dirt roads are sandy, washboarded, or gravel. The Willow Springs road offers an enjoyable two- to three-hour ride. Most popular biking trails in the Moab area are on Bureau of Land Management (BLM) land outside of the park.

FOUR-WHEEL-DRIVE ROUTES

Arches has a limited number of four-wheel-drive roads. ATVs/OHVs are prohibited. Check at the visitor center for current road conditions, especially after recent rain. The Bureau of Land Management (BLM) maintains many popular 4WD routes outside the park.

TRAVELING WITH PETS

Activities with pets are limited at Arches. Pets are prohibited on hiking trails, at overlooks, or anywhere in the backcountry, even in carriers. You may have your pet in the developed campground and may walk your pet along paved roads. Your pet must be leashed at all times when outside a vehicle. For your pets' safety, do not leave them in vehicles when temperatures are above 65°F (18°C) as they can die of heat exhaustion.

Outside the national parks, these public lands offer great hiking opportunities and do allow pets on trails:

- **Bureau of Land Management (BLM):** 435-259-2100
- **Manti-La Sal National Forest:** 435-259-7155
- **Dead Horse Point State Park:** 435-259-2614

Inquire with these public lands for any restrictions.

KENNELS OUTSIDE THE PARK

There are two kennels with boarding services in Moab:

Karen's Canine Campground	Moab Veterinary Clinic
2781 S. Roberts Rd.	4575 Spanish Valley Drive
435-259-7922	435-259-8710

CLIMBING AND CANYONEERING

It is your responsibility to know and follow all climbing & canyoneering regulations, route closures, and group size limits. Obtain day-use permits and route information at the kiosk located in the visitor center plaza or on the park website. **Climbing of any type is prohibited on all arches and prominent features.** Slacklining is always prohibited. Travel only on designated trails, rock or sandy washes to protect soil crust and practice Leave No Trace ethics. Most routes require advanced skills; assess your abilities and risks appropriately. Plan well and be prepared for self-rescue.

EMERGENCY!

Any number of emergencies can occur while you are visiting the park: hiking accidents, medical emergencies or perhaps you have locked your keys in your vehicle. If you have an emergency:

- Dial 911 on your phone: You will reach the Grand County Sheriff's Office, who will contact a ranger in the park.
- Contact a park employee. Many park rangers are trained emergency medical technicians. Law enforcement rangers can investigate vehicle accidents, handle other police matters, as well as take reports of lost hikers, fires or other emergencies.
- Go to the visitor center: If the building is closed, use the pay phones in front of the building to dial 911 (no coin is needed).

ACCESSIBILITY

Not all park facilities meet mandated standards, but we're working toward increased accessibility. Visitors with mobility impairments can access:



- Visitor Center: Ramp and reserved parking.
- Restrooms: Throughout the park including the visitor center and Devils Garden.
- Campsite: Devils Garden site #4H.
- Park Avenue Viewpoint: Paved path with slight slope near end.
- Delicate Arch Viewpoint: Hard surface, level.
- Balanced Rock Viewpoint: Paved surface, level.
- Wolfe Ranch Cabin/Rock Art Panel: Hard surface, level.
- Double Arch: Hard surface with slope.

UNMANNED AIRCRAFT

Launching, landing, or operating unmanned aircraft (such as model airplanes, quadcopters, or drones) on lands and waters administered by the National Park Service is prohibited.

Sharing the Scenery

Arches National Park contains the world’s largest collection of natural stone arches, as well as a treasure trove of fins, bridges, pinnacles, and balanced rocks. Despite this diversity, most visitors flock to the same four destinations: Balanced Rock, Devils Garden, Delicate Arch, and the Windows. Parking lots at these popular areas frequently overflow with cars during the busy season (March through October). On the busy weekend of Memorial Day 2015, entrance station lines overflowed onto the highway, causing long waits and testing visitors’ patience before they even crossed the threshold.

Arches National Park is developing a Traffic Congestion Management Plan to explore ways to reduce parking congestion and crowding in the park. Our goal is to protect and enhance your experience while protecting park resources at the same time.

Arches is a popular place for a reason. The breathtaking scenery attracts people from around the world. Even during the busy season, you can use the following tips to have an enjoyable experience and to help preserve these timeless landscapes for others to enjoy for years to come.



Parking is limited between March and October. The park is especially crowded on holidays and weekends.

HERE ARE SOME TIPS TO REDUCE TRAFFIC AND TENSION:

- **Start your day early.** Try entering the park before 8 am. Sunrise is just as beautiful as sunset.
- **Relax and allow yourself extra time** to reach your destinations. There is plenty of scenery for all to enjoy, and the rocks aren’t going anywhere—at least, not on a human time scale.
- **Consider carpooling.** Parking is very limited, so consider leaving extra vehicles, large RVs, or trailers at the hotel, campground or visitor center parking lot.
- **If the park is too busy, visit other parks and public lands nearby.** See page 8 for some options.

AN EXTRA NOTE ABOUT PARKING

Acceptable parking places include individually marked stalls, parking “lanes” along fences and existing turnouts along the roads. Never park on vegetation or in a manner that blocks traffic, and please don’t hold up the flow of cars by waiting for a parking spot. If there isn’t room at your chosen destination, move to another area and come back later.



Hey Kids— This One’s For You!

Do you want to explore Arches and help protect the park? Then become a Junior Ranger! Becoming a Junior Ranger is a serious and important task, but it’s lots of fun too. Ask at the visitor center how you can get involved. Options include completing



a booklet or checking out a Red Rock Explorer Pack. It’s that simple! You’ll earn a badge and certificate and join the ranks of the many Junior Rangers who help protect this special place.

Make Memories and Leave No Trace

Your eyes stare in wonder, your breath catches, and you can’t stop taking pictures. Surrounded by such beauty, it’s easy to see why this place was deemed worthy of special protection as a national park. Created to protect “gigantic arches, natural bridges, ‘windows,’ spires, balanced rocks and other unique... sandstone formations,” Arches National Park is an exceptional place.

An exceptional place with a very common problem: graffiti on those unique and beautiful rocks. You might be shocked, “Graffiti? In a national park?” Nearly every day, rangers find words or shapes drawn, carved, scratched, or painted on rocks at Arches. Over one million people visit every year, and many may not know that all graffiti in the park is vandalism – no matter how small or superficially drawn.

Leaving a mark is in our nature. Across the Colorado Plateau, American Indians, settlers, and cowboys all left signs of their presence. These marks are part of regional history, dating back hundreds of years. But the world is a different place now: there are more people and more choices in how we express ourselves. Writing on the walls isn’t necessary, and in a national park, it’s illegal.

Yet graffiti keeps appearing throughout the park: under arches, on boulders, atop fins—even across ancient petroglyphs. It is a growing problem facing many national parks, as you may have seen in recent news stories. Removing graffiti takes time, care, and a lot of hard work. Depending on the type of graffiti, park staff may use brushes and spray bottles, or grinders and sledge hammers to remove it. Even if the graffiti is removed, the rock is



Examples of graffiti (bottom) include chalking, carving, and scratching. Any kind of marking on the rocks is unsightly and illegal, and it takes a significant amount of staff time and effort (top) to remove.

still discolored. It will never be the same.

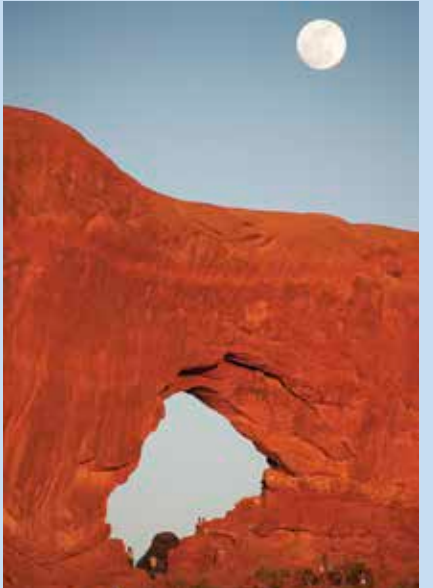
Will you help stop this problem? Instead of carving on the rocks, there are many other ways to mark your journey here: a spectacular photo, an unforgettable hike, a quiet moment of reflection. Be inspired by the National Park Service mission: “to preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.”

We can all do our part to achieve this mission. Help protect Arches National Park by not leaving your mark. Make memories, take photos, and leave no trace.

Photo Suggestions

Take home great photos of your Arches experience. Below are some tips for where you might capture that magic moment at both sunrise and sunset.

Early Morning	Late Afternoon
Moab Fault	Park Avenue
The Three Gossips	La Sal Mountains Viewpoint
Sheep Rock	Courthouse Towers
The Great Wall	Petrified Dunes
Turret Arch	Balanced Rock
The Spectacles	The Garden of Eden
Double Arch	The Windows
Cache Valley	Delicate Arch
Wolfe Ranch	Fiery Furnace Viewpoint
Delicate Arch Viewpoint	Skyline Arch
Landscape Arch	Fins in Devils Garden
Double O Arch	Tower Arch



Sunset / moonrise at North Window.



Check out park photos at flickr.com/archesnps or



instagram.com/archesnps

Plan Your Visit

Here are some suggestions to help you make the most of your visit, even if it is brief.

Driving

- If you have 1½ hours, you can do either of these two drives:**
- Drive to the **Windows Section** and see some of the park’s largest arches. (Add one-half hour to stroll beneath either **North Window** or **Double Arch**.) or
 - Drive to the **Delicate Arch Viewpoint** and see the world’s most famous arch just a short distance away. Stop at **Wolfe Ranch** on your way back, and imagine what it would have been like to homestead this relatively barren area in the late 1800s.

If you have 3 hours:
Do both drives listed above (or do one drive, spending 10 minutes at each viewpoint on the way).

If you have 4½ hours:
You can drive all of the paved park roads, spending 10 minutes at each viewpoint, and take quick drives to the **Windows Section**, **Wolfe Ranch**, and **Delicate Arch Viewpoint**.

Can’t decide?
Well, forget the schedule and stay another day!

Hiking

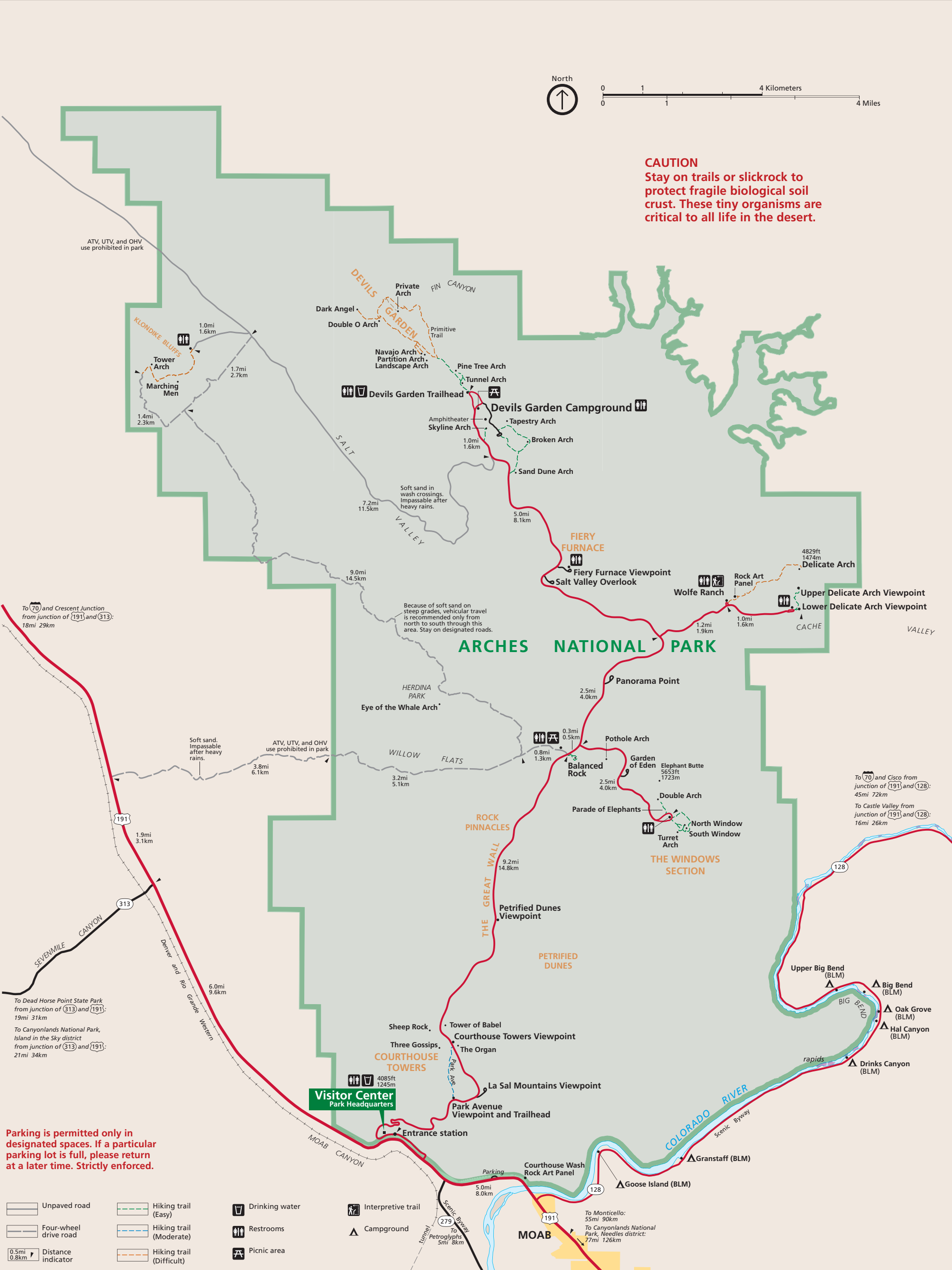
Time allocations are based on an average hiking speed of two miles per hour, and include time to drive to the trailheads. (Time spent marveling and contemplating the majestic wonders and sights varies greatly and is not included here.)

- In two hours, you can do one of these four routes:**
- Hike the Windows loop trail and get an up-close view of **North Window**, **South Window**, and **Turret Arch**. Take the short trail between parking areas, and hike to **Double Arch**. Drive back to **Balanced Rock** and take the loop trail around its base.
 - Take the **Delicate Arch** trail from **Wolfe Ranch** up the sloping slickrock to stand under the best known arch in the world. (During hot months, do this hike early or late in the day.)
 - Hike between the tall sandstone fins in **Devils Garden** to see **Landscape Arch**, North America’s longest.
 - Walk to **Sand Dune Arch**, then across the grassy field to **Broken Arch**. Continue around the loop, through the end of the campground and return. Enjoy **Tapestry Arch** and the sandstone fins.

- In half a day, take one of these three hikes:**
- Hike the entire **Devils Garden** trail, all the way out to the spire called **Dark Angel**. When you return, take the primitive trail **only if you’re up for challenging slopes and exposure to heights**.
 - Take the moderately strenuous ranger-guided hike through the **Fiery Furnace**. Reserve or purchase a ticket in advance (see page 2).
 - If you don’t mind driving the rough road to the remote island of rock known as **Klondike Bluffs**, hike the primitive trail to **Tower Arch**.

If you have a **whole day** or more, combine the above hikes to fill the time you have.

HIKING TRAILS			
Trail	Length	Time	Description
EASY TRAILS			
Balanced Rock	0.3 miles (0.5 km) roundtrip	15-30 min.	A loop trail at the base of a fragile, picturesque rock formation.
The Windows	1 mile (1.6 km) roundtrip	30-60 min.	A gentle climb up a gravel trail leads to the massive North Window, South Window, and Turret Arch. Return to the parking lot via the same trail, or take the slightly longer primitive trail around the Windows by starting at South Window view-point.
Double Arch	0.5 miles (0.8 km) roundtrip	15-30 min.	A relatively flat, sandy trail leads to the base of two giant arch spans which are joined at one end.
Delicate Arch Viewpoint	100 yards (91 m) roundtrip	10-15 min.	In addition to the short accessible trail, another moderately strenuous hiking trail climbs 0.5 mile (0.8 km) toward Delicate Arch, ending at a viewpoint separated from the arch by a steep canyon. You can't reach Delicate Arch on this trail; to hike all the way to Delicate Arch, start at Wolfe Ranch parking area.
Sand Dune Arch	0.3 miles (0.5 km) roundtrip	15-30 min.	Trail leads through deep sand to a secluded arch among sandstone fins. Do not climb or jump off the arch.
Broken Arch	1.3 miles (2.1 km) roundtrip; 2 miles (3.2 km) including the loop.	30-60 min.	From the trailhead at the Sand Dune Arch parking area, the trail crosses a large meadow to the arch and continues to the campground. Trail leads through fins with sand dunes and slickrock. The northern part of the loop includes some moderate scrambling.
Skyline Arch	0.4 miles (0.6 km) roundtrip	10-20 min.	Park at the Skyline Arch parking area. A short hike on a flat, well-defined trail. On a cold night in November 1940, a large chunk fell out of the arch, instantly doubling the size of its opening.
Landscape Arch at Devils Garden	1.6 miles (2.6 km) roundtrip	30-60 min.	Park at Devils Garden trailhead. A relatively flat, gravel-surfaced trail leads to a spectacular ribbon of rock, whose span is more than a football field in length. Short side trips to Tunnel and Pine Tree arches. Trail guide available at trailhead. After Landscape Arch, the Devils Garden trail becomes difficult, with rock scrambling, narrow ledges, and exposure to heights. See Devils Garden Trails description below.
Courthouse Wash Rock Art Panel	1 mile (1.6 km) roundtrip	30-60 min.	Park at the Lower Courthouse Wash parking area, 0.5 miles (0.8 km) north of the Colorado River on the right side of US 191. A short walk south across the Courthouse Wash bridge and a brief climb leads to a prehistoric rock art panel (at the base of the cliffs, facing west).
MODERATE TRAILS			
Park Avenue	1 mile (1.6 km) one way	30-60 min.	From Park Avenue parking area, the trail descends steeply into a spectacular canyon and continues down the wash to Courthouse Towers. If you have a shuttle driver, you can begin at one point and be picked up at the other. For roundtrip hiking, retrace your steps along the trail rather than walking along the park road. Elevation change: 320 feet (98 m)
DIFFICULT TRAILS			
Delicate Arch	3 miles (4.8 km) roundtrip	2-3 hours	Park at the Wolfe Ranch parking area. Take at least 2 quarts (2 L) of water per person. Open slickrock with no shade and some exposure to heights. Elevation change 480 feet (146 m). The first half mile is a well-defined trail. Upon reaching the slickrock, follow the rock cairns. The trail climbs steadily and levels out toward the top of this rock face. Just before you get to Delicate Arch, the trail traverses a rock ledge for about 200 yards (183 m).
Tower Arch	3.4 miles (5.5 km) roundtrip	2-3 hours	Park at the Klondike Bluffs parking area via the Salt Valley Road. The trail climbs a steep, short rock wall, cuts across a valley and then meanders through sandstone fins and sand dunes. An alternate, shorter trail (0.3 mile [0.5 km] one way), begins at the end of the four-wheel-drive road on the west side of Tower Arch. This unpaved road washes out quickly in rainstorms; check road conditions before heading out. P
Double O Arch at Devils Garden	4.2 miles (6.8 km) roundtrip	2-3 hours	Park at the Devils Garden trailhead. Beyond Landscape Arch (listed above), the trail is more challenging as it climbs over sandstone slabs. Foot-ing is rocky; there are narrow ledges with exposure to heights. Spur trails lead to Partition and Navajo arches. Dark Angel is 0.5 miles (0.8 km) farther. Trail guide available at trailhead.
Primitive Trail at Devils Garden	7.2 miles (11.6 km) roundtrip	3-5 hours	The Primitive Trail is an alternative route to or from Double O Arch. It involves narrow ledges, uneven surface hiking and scrambling on slick-rock. Not recommended when rock is wet or snowy, or for those uncomfortable with heights or exposure. Trail guide available at trailhead.
Fiery Furnace (Fee Area)	The Fiery Furnace is a labyrinth of narrow sandstone canyons that requires agility to explore. To enter the Fiery Furnace, you must accompany a ranger-guided hike (see p. 2) or obtain a day-use permit at the visitor center. There is no trail, so we encourage you to accompany a ranger—both for your own safety and to reduce impacts on the area.		



CAUTION
Stay on trails or slickrock to protect fragile biological soil crust. These tiny organisms are critical to all life in the desert.

Parking is permitted only in designated spaces. If a particular parking lot is full, please return at a later time. Strictly enforced.

- | | | |
|--------------------------------|--------------------------|----------------|
| Unpaved road | Hiking trail (Easy) | Drinking water |
| Four-wheel drive road | Hiking trail (Moderate) | Restrooms |
| 0.5mi 0.8km Distance indicator | Hiking trail (Difficult) | Picnic area |

- | | |
|--------------------------|--|
| Interpretive trail | Campground |
| To Monticello: 55mi 90km | To Canyonlands National Park, Needles district: 77mi 126km |



The Heart of the Desert

BY KAREN GARTHWAIT

WATER. The lack of it defines the desert, and yet, evidence of its influence surrounds you. Water's unequalled power to carve solid rock is responsible for the wondrous arches, towers, and other shapes that ignite your imagination.

Cracks filled with rainwater sustain diverse plant life, like the gnarled juniper tree and razor-sharp yucca. Shallow pools called desert potholes teem with microscopic creatures and mean the difference between life and death for a thirsty bighorn ewe. Eight to ten inches a year is just enough rain for desert-adapted life, but what about park visitors? Is there enough water to share?

Yes. Arches National Park provides water at the visitor center, campground and Devils Garden trailhead. When you refill your bottle at any faucet in the park, you're getting a clean, local taste of the desert's most precious resource, and conserving other limited resources shared by every creature on Earth.

Water for park visitors' use comes from deep underground. Two wells reach down through porous sandstone to collect this ancient, naturally filtered source, and underground pipes transport it to sinks, toilets, and drinking faucets throughout the park.

Two specially labeled spigots at the visitor center provide purified water just for drinking. This water has been treated to remove particles and organic chemicals, making the water extra-soft and good tasting. **Please conserve this specially-treated water and do not bathe at these spigots.** Also, make sure to turn faucets completely off when you are finished, so that none of this precious resource is wasted.

Wisely choosing how your water is packaged also conserves limited resources. Manufacturing a 16-ounce plastic water bottle uses four times that volume of water. Reusing bottles reduces your imprint today and far into the future.

When you drink park water, a drop of the desert becomes a part of you. It is a way to take Arches home with you, along with your memories, photos, and a little red sand in your shoes.

Responsibly sharing water with the juniper, yucca, pothole creatures, bighorn sheep, and countless future visitors is part of the experience at Arches. So fill your cup, say a word of thanks, and enjoy a refreshing gulp of the heart of the desert.

Drinking from the Big Dipper

BY ALICE DE ANGUERA

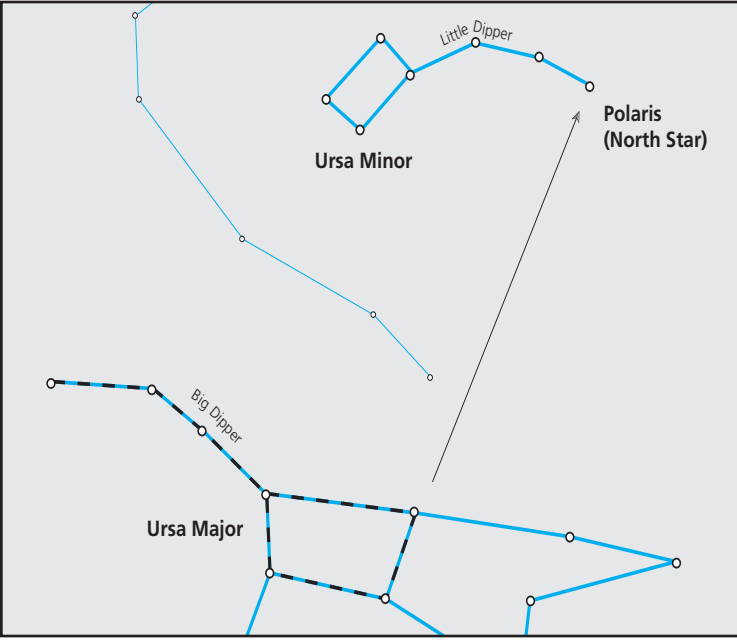
YOU'VE HEARD ABOUT ARCHES NATIONAL PARK'S VEL-vety dark skies and glittering starry views, but you're not sure where to start. First, find a dark place away from the lights of Moab (Arches is open at night too!) Turn off flashlights and car lights for at least 20 minutes to let your eyes adjust to the dark. Then begin with what you know – the Big Dipper. The Big Dipper is part of the constellation Ursa Major or the Great Bear. It has been recognized by humans for more than 2,000 years, guiding travelers and *starring* in stories of many different cultures.

Groups of stars, including the Big Dipper, guided our ancestors to safety and new opportunities. Use the two stars on the end of the Dipper's cup to point you, like an arrow, to the North Star (see picture). The North Star, called Polaris, stands still while all the other stars appear to rotate around it each night. After you find Polaris, use a planisphere or star chart to discover nearby constellations. Little Dipper (Ursa Minor or the Little Bear), curls toward her mother with Polaris as the tip of her tail.

Throughout human history, reading the stars was a central part of life. Native people planned their most important decisions, such as when to plant and harvest, by the celestial calendar. Star stories told of cultural truths. The Big Dipper has been seen as a plow, a wagon, a moose, and even a pig's jaw bone by different cultures. Early explorers used their night sky view like a GPS system. African American slaves used the Big Dipper (they called it the Drinking Gourd) as a guiding

light on their journey to freedom in the north. A starry night view has always been humanity's guide and companion.

In the modern world, the celestial view still guides us and inspires us, from pop songs to space exploration. As the lights of human development increasingly cross park boundaries, natural darkness needs our protection. Join us in this mission – consider turning off or shielding lights at your home or workplace so that light does not shine up or sideways. Stars are not just for astronomers – they are our human heritage.



Traces of the Past

BY ALICE DE ANGUERA

FOR MOST OF ARCHES NATIONAL PARK'S LONG HISTORY, red rock arches didn't exist. Salty inland seas, braided river systems, coastal plains, and sand dunes fill the chapters in our geologic history book. How do we know? Geologists, like detectives, use clues such as fossils, ripple marks, and cross-bedding to understand the story of each geologic layer.

Fossils in some of the oldest rocks in this park help paleontologists crack the case of a former ancient sea. The sea fossils found in the 300-million-year-old Honaker Trail Formation have attracted scientific attention since the 1930s. Cheerio-like discs of crinoid stems, lacy branches of bryozoans, and clam-like brachiopods tell the story of a warm, shallow sea teeming with life. Crinoids, animals also known as sea lilies, look like underwater flowers with feathery arms for collecting food. Trilobites, an early ancestor of the crab, crawled or swam among the corals. While crinoids, bryozoans, and brachiopods still exist, other animals, such as horn corals and trilobites, have been extinct for millions of years.

Fossils are not the only clues to the stories written in the rocks. Patterns, such as ripple marks (evidence of running water), also reveal chapters of geologic history. The main arch-forming layer, Entrada sandstone, is marked by diagonal lines called cross-bedding. These are the inner structure of 160-million-year-old sand dunes frozen in time. Geologists can track changes in ancient wind direction by studying the angle and direction of cross-bedding. Visit Petrified Dunes Viewpoint for a taste of the largest dune field in the history of North America. About 190 million years ago this sandy desert stretched from California to southern Arizona and Wyoming.

Landscape-scale sleuthing, beyond the boundaries of Arches National Park, allows geologists to chip away at geologic mysteries. This is possible because the same rock layers show up at other locations in the Southwest and, for some, as far away as Minnesota! One mystery is how dinosaurs survived in the



Cross bedding, evidence of ancient dunes, near the Windows

hot, dry climate now preserved in the Entrada sandstone. Surveys of nearby lands have revealed fossilized oases that may have offered shelter. Other fossils such as invertebrate burrows, plant pollen and spores, and dinosaur tracks add to the story – and geologists continue to make new discoveries.

To see some local fossils and other geologic clues, visit the Arches Visitor Center geology display. Marine fossils can be seen near the visitor center, and there are several places to see dinosaur fossils in the area, such as Poison Spider Trailhead and Mill Canyon. Remember, it is illegal to collect fossils or make plaster casts of them; leave them for future visitors and scientists to enjoy and study. This landscape has many stories to tell, from marine wonderland to dusty desert. The next time you're out on the trail, bring your curiosity and discover a page or two for yourself.

Why So Many Arches?

ARCHES NATIONAL PARK has the densest concentration of natural stone arches in the world. There are over 2,000 documented arches in the park, ranging from sliver-thin cracks to spans greater than 300 feet (97 m). Why are there so many arches in this place? How do they form? And what is an arch, anyway?

First, you need the right kinds of rock.

Sandstone is made of grains of sand cemented together by minerals, but not all sandstone is the same. The Entrada Sandstone was once a massive desert, full of shifting dunes of fine-grained sand. The grains are rounded so, when packed together, they formed a rock that is very porous (full of tiny spaces).

Crack it into parallel lines.

Deep beneath the surface lies a thick layer of salts. Squeezed by the tons of rock above it, the salt bulged upward, creating long domes. The rock layers covering these domes were forced to crack, like the surface of freshly-baked bread, into a series of more-or-less parallel lines.

Next, add the right amount of rain.

On average, the park receives 8-10 inches (18-23 cm) of precipitation a year. That might not sound like much, but it’s enough to keep the engines of erosion working 24 hours a day, 365 days a year.

Rainwater soaks into the porous Entrada sandstone easily and then slowly dissolves the calcite bonding the sand together—in other words, rotting the rock from the inside out. Water puddles at the bottom of the Entrada layer, just above a denser rock layer, where it erodes a cavity, like one between your teeth. In winter, water trapped between the layers expands when it freezes and contracts, prying the rock apart.

If the park received too much precipitation, the sandstone could erode so quickly that arches might not have time to form. If it never rained here, the engines of erosion would stop.

Let the water do its work.

As erosion happens, a variety of shapes begin to appear. To be one of the park’s official stone arches, a hole must have an opening of at least three feet (1 m) in any one direction. There is no requirement for width; many arches in the park are so skinny you have to place your cheek against the rock to see any light through them.

Is a window a special kind of arch? Not really. “Windows” are arches that are particularly large, are located on a high wall or fin, or “frame” a particularly scenic view beyond.

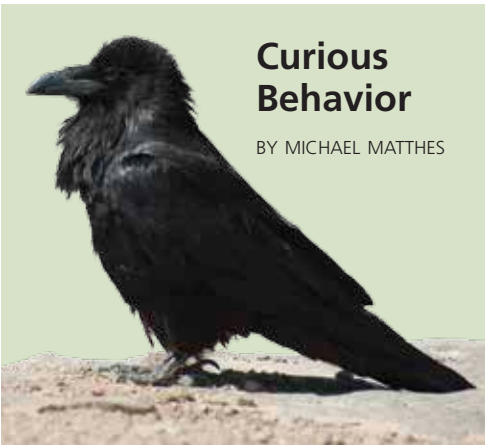
What about bridges? A natural bridge spans a waterway—or somewhere water once ran. Very few bridges exist at Arches, but Natural Bridges National Monument, just two hours south (112 miles), has three tremendous examples of this feature. All of them are visible from their paved scenic road or by hiking trail.

Make sure your rocks don’t rock and roll.

Luckily, earthquakes are rare in this area, otherwise these massive outdoor rock sculptures would splinter and collapse. The fact that over 2,000 still stand, tells us this area has been rather geologically stable for at least 50,000 years.

Lastly, pick the right time to visit. (You did.)

The rock layers visible in the park today were once buried by over a mile of other rock that had to erode first to expose what lay beneath. Visitors one million years ago might have seen an endless flat plain dotted with vegetation. Imagine a visit far into the future, when these layers have fully worn away. What new rock shapes might you discover then?



Curious Behavior

BY MICHAEL MATTHES

From somersaulting through the air to sliding in the snow, the behavior of the Common Raven (*Corvus corax*) is curious to say the least. These bold, playful passerines are one of the most common wildlife sightings in the park. If you’re a “people-watcher” then you may become a “raven-watcher” by the end of your visit; these birds are remarkably like you and me.

Like humans, ravens speak their mind. Their sophisticated avian vocabulary is complex with over 30 types of calls. From the low, croak-like “kraaaah” to the deep, nasal “brooonk,” ravens are expressive communicators. Their vocal repertoire includes hunger calls, defense calls, flight calls, alarm calls, whistles, and territorial announcements. These loud-mouthed birds also make non-vocal sounds like wing whistling and bill snapping. The Common Raven can also mimic sounds from their environment including human speech.

Aerial acrobatics, demonstrations of intelligence, and providing food are key behaviors during the courting process. Once paired, ravens nest together for life, usually in the same location. Though not as social as their close relatives, crows and magpies, they are often spotted with or near their mate.

“Bird brain” isn’t an insult when it comes to the raven; they actually have large brains and are extremely intelligent. Cognitive processes such as imitation, insight, and the superb ability to solve problems truly set them apart from other bird species. Scientists believe that ravens memorize locations of food sources and have observed ravens using sticks as tools to raid other ravens’ food caches. We humans are not the only species that relies on retaining and recalling past experience as we soar through life.

Ravens are opportunists and will eat just about anything they can get their claws on. Most of their diet consists of carrion, lizards, bats, insects, and seeds, but they aren’t opposed to human food as well. These clever scoundrels have been known to break into unsecured coolers and vehicles for tasty yet unhealthy human treats. In an effort to keep wildlife wild, avoid feeding ravens by keeping your food properly stored in a secure location.



A Shining Example

BY MATT SMITH

ENCOUNTERS WITH WILDLIFE, NIGHT SKIES FLOODED with stars, and quiet campfire gatherings are among the experiences that make the Devils Garden Campground such a special place. Not long ago, campers also experienced the constant droning of diesel generators intruding on their tranquility.

The generator noise impeded the National Park Service’s mission to preserve “unimpaired the natural and cultural resources and values” of this special place. Equally disturbing was the engine exhaust (a by-product of the generators running 24 hours a day), as well as the price tag of \$20,000 a year in operating costs and many hours of staff maintenance. The park needed a better way to provide power to the campground, and after years of study and research we finally saw the light... of the sun!

In 1995, the NPS in partnership with the State of Utah installed a photovoltaic/diesel hybrid electrical system for the campground. Photovoltaic (PV) technology – also called solar power – harvests clean energy from the sun and stores it in batteries. Currently 95 percent of the campground’s electrical needs are captured from the sun, and the generators only run if the PV system fails, or on a rare cloudy day in the desert.



Solar panels in the Devils Garden Campground

Noise has diminished, air quality improved, and the money saved can fund other projects that improve visitor experiences.

Thanks to a productive partnership, wise management decisions and implementation of new technologies, the constant whirring of diesel engines and their choking exhaust are no longer part of the Arches camping experience. So breathe deep, and enjoy the serenity.

Where does my money go?

IN 2004, CONGRESS PASSED THE Federal Lands Recreation Enhancement Act (FLREA), which replaced the Recreational Fee Demonstration Program. Authorized through December 2015, the law allows retention of 80 percent of fees collected at a site to remain there for repair, maintenance, and facility enhancement directly related to visitor enjoyment, visitor access, and health and safety.

It also includes interpretation, education, visitor information, visitor service, visitor needs assessments and signs; habitat restoration directly related to wildlife-dependent recreation, wildlife observation or photography; and law enforcement related to public use and recreation.

Fees charged for ranger-guided Fiery Furnace walks also remain in the park and go directly to supporting the program.

Your user fees funded the following improvements at Arches:

- Rehabilitating park trails
- Upgrading roadside bathrooms
- Rehabilitating the Devils Garden picnic area
- Enhancing trailheads and scenic pullouts



If you join a ranger on a Fiery Furnace hike, your fees directly support the program.

Trails in the Windows Section (top) and the Devils Garden Picnic Area (bottom) are just two locations which have received needed attention in recent years.

FIND YOUR PARK

The area surrounding Arches National Park is a treasure trove of recreational opportunities. During your visit, consider exploring these other parks and public lands.



Canyonlands National Park

Island in the Sky: 28 miles (45 km)
The Needles: 79 miles (127 km)
The Maze: 133 miles (214 km)
Canyonlands invites you to explore a wilderness of canyons and fantastically formed buttes carved by the Colorado River and its tributaries. Rivers divide the park into four districts: Island in the Sky, The Needles, The Maze, and the rivers themselves.



Hovenweep National Monument

125 miles (201 km)
Hovenweep includes six prehistoric villages built between A.D. 1200 and 1300. Explore a variety of structures, including multistory towers perched on canyon rims and balanced on boulders.



Natural Bridges National Monument

124 miles (200 km)
Three majestic natural bridges invite you to ponder the power of water in a landscape usually defined by its absence. View them from an overlook, or hit the trails and experience their grandeur from below.

Other nearby public lands:

Colorado National Monument
Manti-La Sal National Forest
Dead Horse Point State Park
Bureau of Land Management

For more area information visit:
www.discovermoab.com



Friends of Arches and Canyonlands Parks

The Friends of Arches and Canyonlands Parks: Bates Wilson Legacy Fund provides direct support to Arches and Canyonlands national parks and Natural Bridges and Hovenweep national monuments in order to enhance existing projects in these spectacular areas, and to conserve the land and its cultural treasures for present and future generations to enjoy.

This mission honors the legendary work of Superintendent Bates Wilson, who came to Arches in 1949, inspiring and leading the effort that resulted in the establishment of Canyonlands National Park in 1964. He is regarded by many as the “Father of Canyonlands.”

Bates Wilson firmly believed that:

- The **park visitor** must have a great experience;
- **Exploratory and educational** opportunities must abound;
- **Preservation** is our obligation to future generations;
- **Youth** indeed are the future: Bates enhanced the lives of countless young people as they explored and learned to appreciate the parks with him.

Please visit www.foacp.org to learn more and make your donation. Thanks!

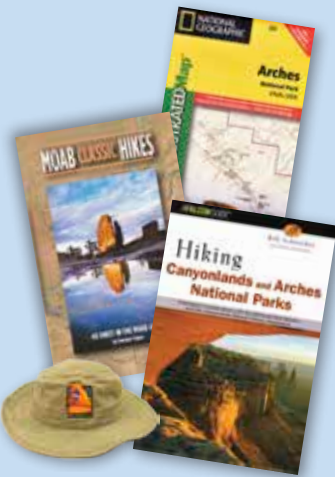
CANYONLANDS NATURAL HISTORY ASSOCIATION (CNHA) sells hundreds of items about Arches National Park and the rest of Utah’s canyon country.

Visit their outlets in **Arches Visitor Center** and **Moab Information Center** (corner of Center & Main in Moab).



CNHA
3015 S. Highway 191
Moab, Utah 84532
(800)840-8978 (toll free)
(435)259-6003
www.cnha.org

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